



A Signal Corps soldier leans over a cliff to repair telephone lines in Korea in January 1951.

System.

Much of this equipment was used in Vietnam, but there were problems. The Signal Corps faced the problem of unreliable and inadequate radio circuits linking Southeast Asia and Washington. Troops carried equipment that was too heavy and of poor quality. The Army relied heavily on high frequency radio that could be easily jammed or affected by dust, overheating and inadequate frequencies.

That era's improvements in Army communications included such innovations as troposphere-scatter radio trunks. Unlike conventional microwave relay links requiring line-of-sight, tropo passed over extensive distances of enemy terrain. Tropo answered the demand for high-quality telephone and message circuits, and enabled multiple circuits to connect locations 200 miles apart. For the first time in combat, the Signal Corps used an experimental satellite ground terminal linking Vietnam, Hawaii and Washington. This system supplied the first reliable, high-quality communications in and out of Vietnam.

Modernization efforts shot ahead in the 1980s to take the Army into the 21st century. Science and technology shaped the Signal Corps' destiny; innovations and equipment such as satellites, fiber-optic cable, digitization, computers and connectivity were just around the corner to provide increased mobility, durability, increased fre-

quency selection and overall system reliability.

The Signal Corps was a pioneer in the satellite and space age. Project Diana in 1946 chronicled Signal Corps' scientists' efforts to use the heavens for new frontiers in communications. Using a WWII-era radar, the scientists bounced a radar signal off the moon, proving humans could communicate electronically through the ionosphere into outer space. In December 1958, SCORE I, the world's first communications satellite, carried a Signal Corps-developed communications package into space.

However, since 1962, the Army's primary responsibility has been satellite ground terminals, so the Signal Corps developed satellite communication terminals to be reliable, mobile, quick to set up, unlimited by terrain and secure from enemies. These systems are the primary focus of the Signal Regiment's future.

Other innovations have included the tactical Internet, a router-based data and voice network using commercial-standard Internet protocols and designed to provide a seamless



Soldiers train on avionics-equipment maintenance, formerly a Signal Corps responsibility, in the 1970s.

flow of digitized information from the foxhole to the brigade commander. New tactical radios have brought better command and control at battalion-and-below level. New communications architecture has meant better command to division and corps areas, and it's interoperable with existing U.S. and NATO tactical and strategic communications systems, including tactical satellites.

Battlefield communications have come a long way from the wigwag flag, torches and electric telegraph. The battlefield of the 21st century will be more sophisticated; as the Army heads toward this arena, the Signal Regiment will continue to develop equipment and doctrine to provide the best communications possible for the Army.



Soldiers discuss battle operations in a tactical operations center at Twin Bridges, Korea, during Exercise Foal Eagle. Battalion control centers, heir to TOCs, and TOCs are the nerve centers for Signal battle operations.